

A large, multi-story brick building with a gabled roof and several arched windows. The building is situated on a grassy bank overlooking a canal. In the foreground, there is a stone wall and a paved area. The water in the canal is dark and reflects the sky. The overall scene is bright and clear, suggesting a sunny day.

# Theatr Brycheiniog – Wales' first solar-powered theatre

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**Assuming the local authority provides planning permission, Theatr Brycheiniog will be generating its own energy by the autumn of 2008. Deputy Director, *Lee Collins*, explains how the venue funded the project**

Theatr Brycheiniog is a ten year-old purpose-built 477-seat theatre set beside the canal in Brecon, a historic market town of 9,000 people within the Beacons National Park. It hosts 120 professional and 50 community based performances per year and also tours professional theatre and music in collaboration with companies from the UK and around the world. It employs 26 staff and draws its core audiences from a 30-mile radius. The building is owned by Powys County Council and managed by a charitable trust.

The theatre is part of the Mid Wales Entertainment Circuit. The Circuit was created in 1982 by the Development Board for Rural Wales, and had its roots in that organisation's social development remit. A consortium of the eight principal professionally managed

theatres and arts centres in Mid Wales, the Circuit undertakes a number of innovative new projects and activities each year, as well as raising and distributing funding effectively and strategically, sharing skills and information, organising tailored training programmes and initiating joint projects.

For many years, the Circuit's venue directors have been exploring ways to commit to renewable energy sources, reduce their business's carbon emissions and offset the cost of rising energy bills. The main obstacle has been cost and lack of knowledge regarding funding processes. As a result, despite best intentions, the gains have been small, mainly as the result of better power management (switching off machinery when not in use for example).



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More recently, the legislation proposed in the Climate Change Bill, the Energy Bill and the Planning Bill has prompted the Circuit to take a more serious look at how its members can reduce the impact they have on the environment.

In 2007, with the appointment of a new co-ordinator who is both passionate about renewable energy and has experience of the funding mechanisms to help install it, the Circuit initiated a formal programme to explore the viability of harnessing alternative energy sources at its member venues. In a pilot project, the Circuit worked with Theatr Brycheiniog to fund and fit photovoltaic cells to its roof. The theatre also has some energy saving facilities built-in. The light, bright nature of the building means there is some passive solar gain in summer. It uses energy-saving bulbs in office spaces and staff are encouraged to consider power usage at all times. The lighting and heating systems are controlled by a building management system. In addition, a more efficient boiler has recently been installed which has reduced energy consumption.

In order to create Wales' first solar powered theatre, the Circuit is working within the framework of the Department for Business, Enterprise and Regulatory Reform's (BERR) Low Carbon Buildings Programme Phase 2, where organisations can apply for 50% of the cost for installing approved micro-generation technologies. Grants for the installation of such technologies are available to public sector buildings and charitable bodies. In order to qualify for a grant, applicants are required to enter into agreements with one or more of the Department's 'framework suppliers' that oversee the supply and installation of the technology.

The framework supplier for the solar-powered theatre project is The Low Carbon Partnership (TLCP), based in Machynlleth in mid-Wales. Formed in 2006 by Dulas Ltd and Sundog Energy Ltd, TLCP was one of the first three organisations awarded contracts by BERR (then the responsibility of the Department for Trade and Industry). TLCP prepared a quotation for the supply and installation of an 11,960 watt peak photovoltaic renewable energy system producing approximately 8,970 units of electricity per year and saving 5,095 kg of CO<sub>2</sub> per annum. This energy yield is the equivalent of running a kettle continuously for 125 days or running 20 Dell PCs with LCD monitors for 637 days. The total cost of the project is £60,775.

The bid to BERR was successful. However, the Circuit needed to secure the remaining 50% of the cost and set about applying for other sources of funding.

Research revealed there to be a limited number of potential funding partners. However, the outputs of the project were numerous and it was relatively easy to provide evidence of the social and economic benefits of supporting the project. Local authorities are committed to meeting their own targets for carbon reduction and renewable energy, and large energy companies invariably have corporate social responsibility programmes, which include commitments to environmental initiatives.

In the applications therefore, it was stressed that the theatre also recognises that the building will have a role to play in educating children and the public in the importance of renewable energy. It proposed that, in addition to continuing its commitment to a programme of environmentally themed theatre in education work with local schools, certain children's events will be advertised

as 'solar powered theatre' and audiences will hear all about why the theatre uses solar power and how it can contribute to environmental issues.

In addition, an integral part of the installation is a monitor fitted in the theatre's foyer to log how much electricity is being generated from the sun at any time. It is hoped that schools will be asked to get involved with the monitoring process to check each day's output and learn more about solar power. The Circuit and Theatr Brycheiniog applied initially to two sources and were successful with one, for 25% of the cost. The remaining 25% was secured through a further application. The project funding may be summarised as:

BERR Low Carbon Buildings Programme	£30,000
Scottish Power Green Energy Trust	£15,000
Brecon Beacons National Park Sustainability Fund	£15,000
Theatr Brycheiniog	£775

At the time of writing, Theatr Brycheiniog is awaiting the result of the final stage of the planning application. Once permission has been granted, the installation can proceed. It is hoped that the theatre will be generating its own energy by September 2008. Flushed with the success of its pilot project, the Circuit is now examining the potential for similar projects at the remaining member venues. For further details on low carbon projects and funding visit [www.lowcarbonbuildingsphase2.org.uk](http://www.lowcarbonbuildingsphase2.org.uk) and [www.tlcp.co.uk](http://www.tlcp.co.uk).